Clusters: A New Growth Strategy For Wisconsin

Sponsored by:
Department of Commerce
Wisconsin Manufacturer's & Commerce
University of Wisconsin-System
Wisconsin Technical College System
Department of Workforce Development

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Philip Edw. Albert, Secretary
Department of Commerce

An Industry Cluster:

A geographic concentration of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that are present in a nation or region.

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Industry Clusters

Characteristics

- Systemic Relationships
- Geographically bound
- Life cycles
- Externalities

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Industry Clusters

Ingredients for growth

- Innovation and entrepreneurship
- Communication mechanisms
- Learning and knowledge transfer
- Industry leaders
- Access to tacit knowledge

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Dairy Industry Cluster

- Expansion
- Modernization

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Tourism Cluster

- $11.4 billion in traveler spending, up 70 percent since 1996
- 380,000 jobs
- $6.3 billion payroll

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Wisconsin's Industry Cluster Initiative

- Launched at a "Cluster Champions Forum" on August 2nd
- Industry "Champions" to take lead on organizing clusters

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Partners

- Individuals and organizations working to launch and support the project.
- Cluster Advocates
  - Professor Don Nichols
  - John Torinus

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Partners

- Advance in Green Bay
- Center on Wisconsin Strategy
- Department of Commerce
- Department of Workforce Development
- Forward Wisconsin
- Lafollette School of Public Affairs
- Wisconsin Manufacturing Extension Partnership

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Partners

- Printing Industries of Wisconsin
- Wisconsin Biotechnology Association
- Wisconsin Paper Council
- Wisconsin Technical College System
- The Development Association in Superior
- UW-Extension
- UW-Superior Transportation & Logistics Research Center

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Panelists

- **Ralph Kauten, Quintessence, Madison,** *Biotechnology Cluster*
- **Bill Ward, Procter & Gamble, Green Bay,** *Paper/Forest Products Cluster*
- **Paul Ericksen, John Deere, Horicon,** *Manufacturing/Materials/Plastics Cluster*
- **Bill Hendee, Medical College Of Wisconsin, Milwaukee,** *Medical Instruments Cluster*
- **Ken Thompson, Jeff Foster Trucking, Superior,** *Transportation Cluster*
- **John Torinus, Serigraph, West Bend,** *Printing Cluster*

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Biotechnology Cluster

Ralph Kauten,

President and CEO

Quintessence, Madison

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Biotechnology in Wisconsin

- Wisconsin Biotechnology Association
  - 90+ members
- Elements for biotech industry growth
  - Strong research capacity
  - Strong biotechnology commercialization
- Wisconsin doesn't rank in national surveys
- Implications for growing biotechnology

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Ernst & Young Annual Report Public Biotech Companies 2001

$ in Billions	# Cos.	Mkt Cap	# of Empl	Total Assets
San Diego	31	$23.3	7,976	$5.9
Mid-Atlantic	19	$22.2	3,871	$4.2
Midwest	15	$1.7	1,394	$0.6

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Implications for Wisconsin Biotech Companies

- Achieve sustainability quickly
  - Short product development cycles
  - Smaller market size
  - Lower risk/reward strategies
- Wisconsin biotech companies will
  - Receive less capital investment
  - Employ fewer people
  - Compete against better financed rivals

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Commitment to Biotechnology

- By increasing invested capital in Wisconsin
- One will
  - Increase personal income
  - Increase tax revenue
  - Build long term value
- Commitment by WARF

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Paper/Forest Products Cluster

Bill Ward,

Manager of Government Relations

Procter & Gamble, Green Bay

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Wisconsin's Paper Industry

- Wisconsin is #1 Papermaking State in US
- Pulp, Paper and Allied Companies:
  - Employ over 50,000 in Wisconsin
  - 1 in 11 manufacturing jobs
  - $2.5 Billion in wages
  - Wages 60% above average for all WI
  - Base for 125,000 additional jobs

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Paper Industry Headlines….

Industry profits down 46% vs 2000

Durango-Georgia to close St. Mary's Mill

Overvalued Dollar Threatens U.S. Paper Industry

S&P Cuts ratings on Georgia-Pacific to speculative grade

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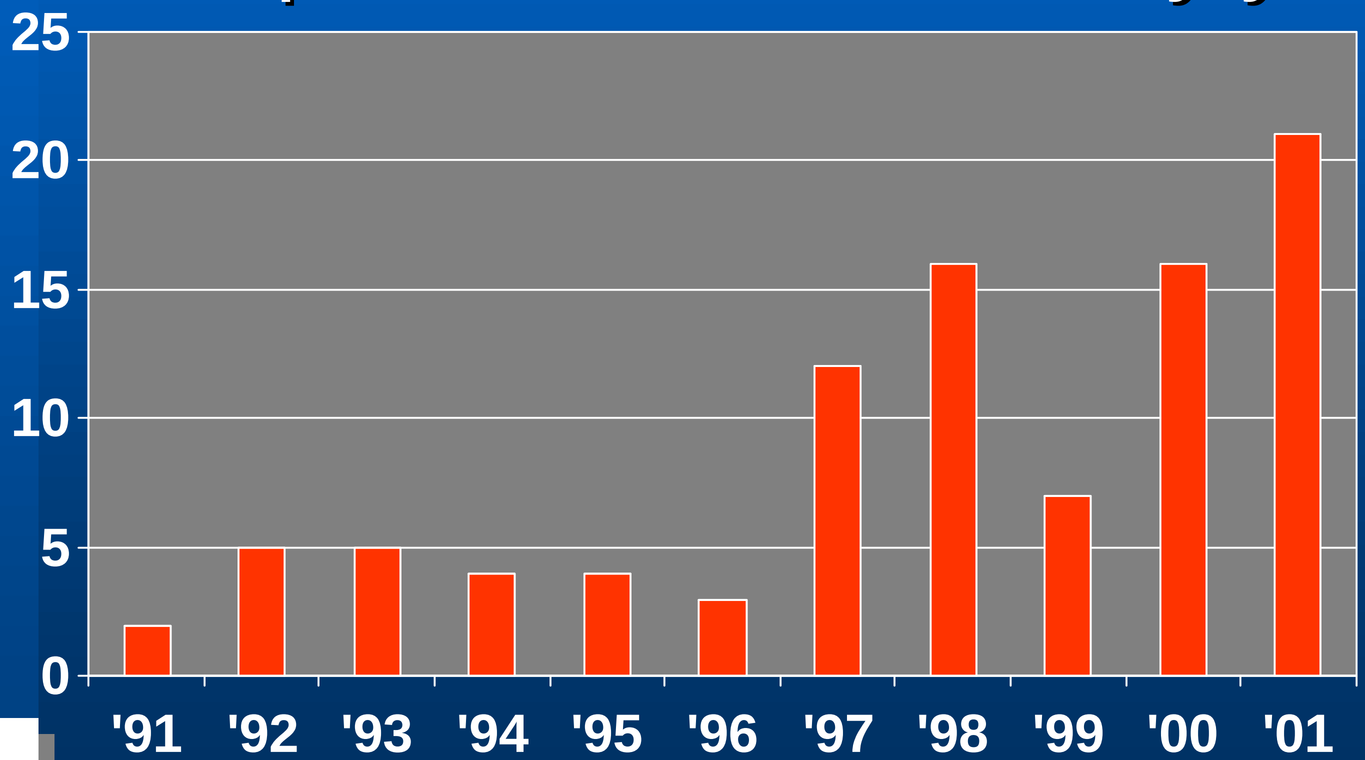
Paper Industry Trends

US Paper Mill Shutdowns by year



Source: American Forest & Paper Association

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Paper Industry Trends

- 90% of Paper & Paperboard growth in ’97 to ’00 was supplied by imports
- U.S. demand and Output fell 6% in 2001
- WI Employment for ’92-’01 Indexed at 99
- WI Employment for ’00-’02 Indexing at 96
- US Employment for ’92-’01 Indexed at 92

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Paper Industry Trends

- WI asset age of 26 years vs. 18-21 in other regions
- WI has 28 operating companies now vs.   35 in 1980
- US Tissue segment has lowest Capacity Utilization (87%) since ’80’s

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Wisconsin Paper Cluster Challenges

- Location & Demographics
- Globalization – Industry & Suppliers
- Innovation
- Energy – Reliable, Affordable Supply
- Taxation & Economic Development
- Regulatory Climate & permit lead time

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Wisconsin Paper Cluster - Next Steps

- Innovation:
  - Collaborative effort among industry, government, and higher education
- Communication:
  - Trade Groups & Business Associations
  - Wisconsin industry conference – October

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Manufacturing

Paul Ericksen,

Manager of Supplier Flexibility

John Deere Horicon Works, Horicon

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Manufacturing

Key issues

- The changing dynamic of Original Equipment Manufacturer (OEM) Costs
- The threat of low wage countries to Wisconsin's economy

Manufacturing

Historic OEM Cost Breakdown

- OEMs were vertically integrated- most costs related to the production of a product were self-contained
- Suppliers were located local to the OEM due to logistical issues
- OEM Cost-Of-Goods-Sold (COGS) dollars were spent based on where the OEM was located

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Manufacturing

OEM Cost Breakdown Today

- OEMs are primarily designers/ assemblers
- The vast majority of an OEM's Cost Of Goods Sold (COGS) is spent buying purchased parts from suppliers
- Streamlined communications and logistics mean suppliers can be located remote to their OEM customers

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Manufacturing

Conclusion:

Economic development efforts would more effectively focus on strengthening traditional OEM suppliers, i.e. small and medium sized manufacturers, than on attracting new OEMs!

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Manufacturing

John Deere Cost of Goods Sold Example

- JD Power Products (Tennessee) COGS
  - 20% spent in Tennessee due to factory location
  - 32% spent with Suppliers located in Wisconsin
- Wisconsin's economy receives $29.7 million more in annual benefit than Tennessee's due to its strong base of small and medium sized manufacturers, i.e. suppliers

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Manufacturing

Supply Chain Facts

- Most of the product produced by small and medium sized manufacturers is sold to OEMs, <u>not the consuming public</u>
- Small and medium sized manufacturers provide more jobs and job growth than OEMs
- Wisconsin's small and medium sized suppliers are the basis a *manufacturing cluster* – one that must be nurtured.

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Manufacturing

- Low wage competition typically provides "parts only", i.e. they provide few value added services and so compete- and compete very well- on piece price alone
- Wisconsin faces the prospect of losing its industrial base to low wage competition as long as its small and medium sized manufacturers are regarded as *commodity* Suppliers

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Manufacturing

- **Lean is *necessary* <u>but not</u> *sufficient***
- **Value added services would distinguish Wisconsin's suppliers as *strategic* vs. the low wage commodity producers**

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Manufacturing

- Working through OEMs is a smart strategy
- It facilitates reaching the high impact firms
  - – The six original firms in the Wisconsin Manufacturers Development Consortium have **290 Suppliers** located in **44** Wisconsin counties that employ **50,000**
- We know how to do this- in fact, Wisconsin created the model for doing this

The WMEP Supplier Training Program

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Manufacturing

The *Window of Opportunity*

- Once Wisconsin loses its base of small and medium sized manufacturers, they will be gone forever
- Wisconsin must start *acting* now, in a <u>wide reaching</u> and <u>sustainable</u> way, or it faces the reality of losing that base

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The Supply Chain State

Medical Instruments Cluster

William Hendee,

Senior Associate Dean and Vice President, &Dean of the Graduate School of Biomedical Sciences,

Medical College Of Wisconsin, Milwaukee,

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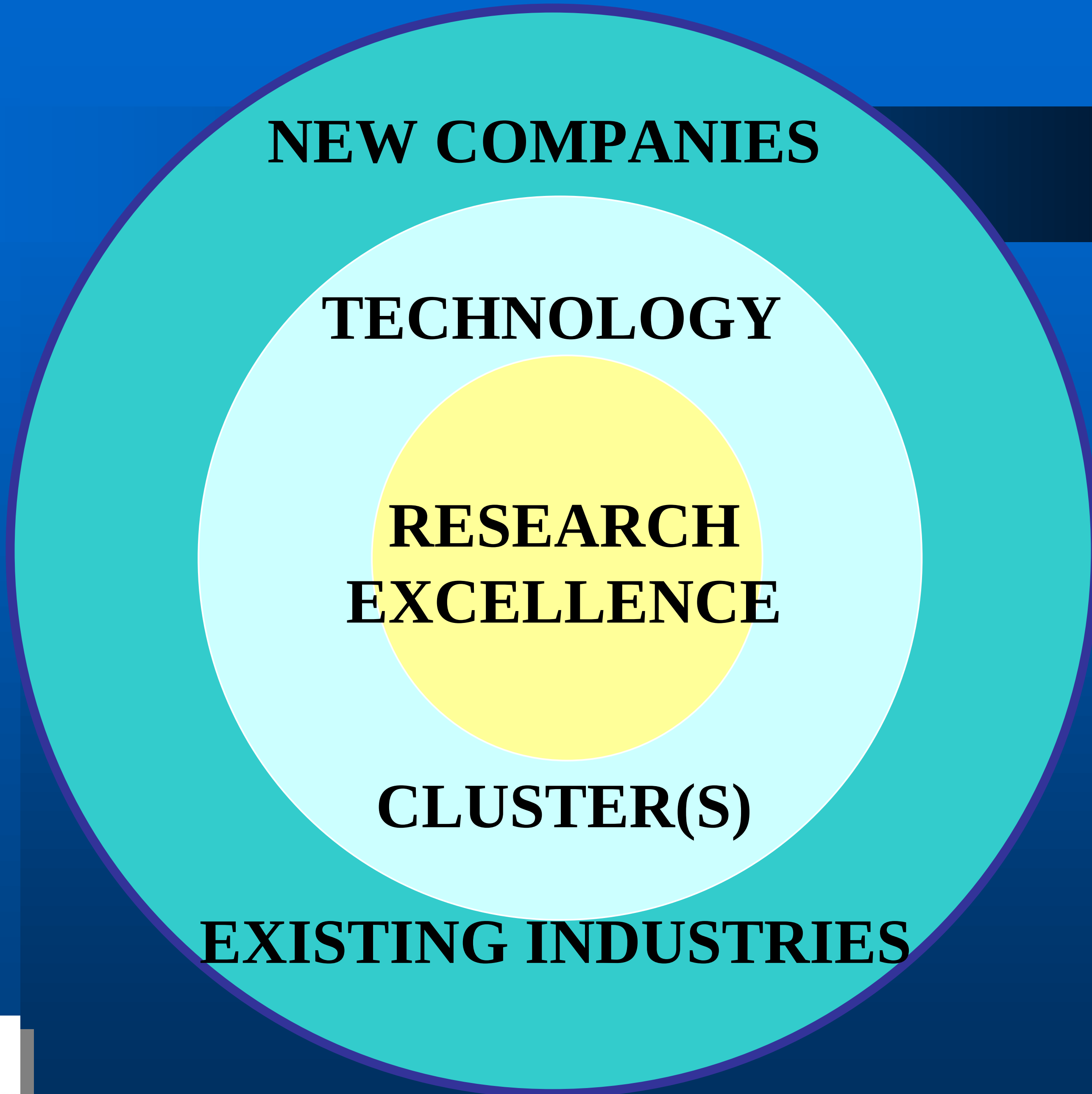
NEW COMPANIES
TECHNOLOGY
RESEARCH
EXCELLENCE
CLUSTER(S)
EXISTING INDUSTRIES

MEDICAL EQUIPMENT RESEARCH

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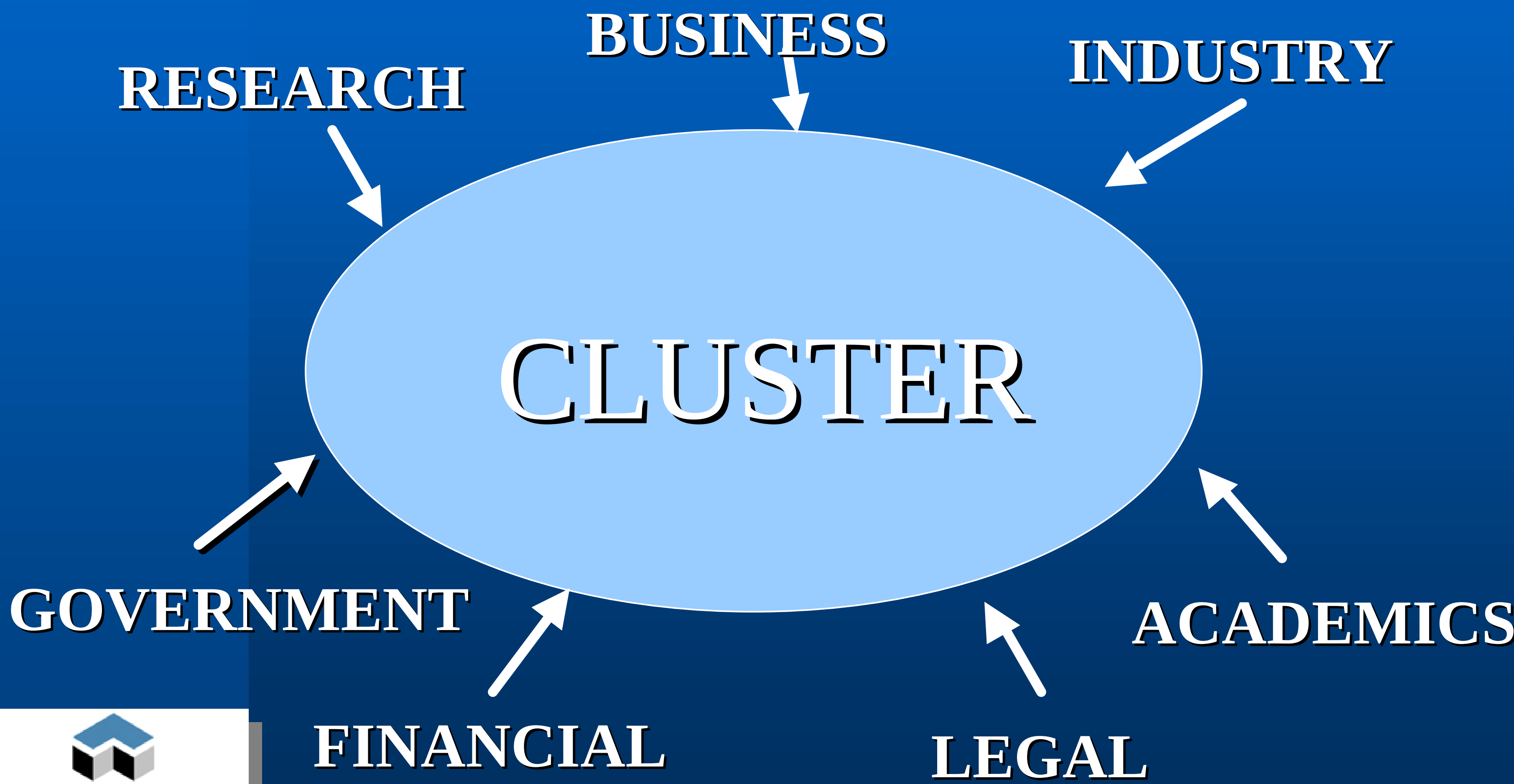
MEDICAL EQUIPMENT CLUSTER
RESEARCH CENTER(S)



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Transportation Cluster

Ken Thompson,

President

Jeff Foster Trucking, Superior

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Printing Cluster

John Torinus,

CEO,

Serigraph, West Bend

Printing Cluster

- **Established a Printing Cluster Council**
- **Developed Initiatives to Propel Printing Growth**

1.Create Public Sector R&D

- Establish center at a college or university level.
- Lure the small R&D operations of printing trade associations to Wisconsin

2. Lead on Energy Infrastructure

- Create more generation and transmission capability across the state.
- Re-examine nuclear power generation as a source of inexpensive, low polluting energy.
- Add cross-border gas lines to Illinois
- Upgrade Mitchell International Airport and regional airports in Dane, Washington and Waukesha counties.

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Printing Cluster

3. Change to Collaborative Regulation from Command and Control

- Adopt the “Green Tier” regulatory philosophy, which encourages collaboration between industry and government.
- Set time limits for approval of equipment and ink permits.
- Engage the University of Wisconsin’s resources to understand and improve air quality in the Milwaukee metro area.

4. Enhance State’s Excellent Education and Training Offerings

- Complete program between WCTC and Marquette University to train mechanical and electrical engineers and expand the program to chemists and chemical engineers.
- Market positives of the printing cluster to high school students.

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Clusters: A New Growth Strategy For Wisconsin

- Today’s presentation available on the Economic Summit Website
- Follow the Cluster Initiative Progress at

www.buildwi.org

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